

### **REMARKS**

The Office Action mailed March 12, 2002, has been received and its contents carefully noted. In order to advance prosecution, proposed claim changes were prepared and were discussed with the Examiner, Dr. Liliana Di Nola-Baron, and her supervisor, Mr. Speer, during the personal interview of August 28, 2002. In this Amendment, the title has been replaced, claims 29-38 have been cancelled without prejudice or disclaimer, claims 15, 17, 20, 22, 24, and 27 have been amended, and new claims 39-57 have been added to the Application.

Support for "glucan, mannan, and chitin" in claims 15 and 22 is found in the specification on page 11, lines 4-11.

**Claims 15-28, and 39-57 are now pending in the Application and are submitted to be in allowable condition for the reasons given in the following.**

**The rejection of claims 15-39 under 35 U.S.C. §112, second paragraph, has been obviated by the amendments made herein to claims 15-28 and by cancellation of claims 29-39 (replaced by new claims 47-57).**

While Applicants consider that "**plastic fluid**" is a term of art which would be known by an artisan, the phrase "plastic fluid" has been deleted from the claims without prejudice as not needed to distinguish over the applied prior art in view of the Examiner's objection.

In new claims 47-57, the expression "**... provides a pre-selected time at which dissolution begins in a solvent in use ...**" has been used in place of "**preselected dissolution time**". Support for the new expression is found in the specification on page 10, lines 4 and 5, and the figures, and is submitted to be sufficiently definite.

In new claims 47-57, the expression "... wherein the coating agent is applied in an amount ..." has been used in place of "thickness". Support for the new expression is found in the specification on page 21, the last line, as exemplified in weight % amounts on page 28, lines 2-4, and is submitted to be sufficiently definite. The Examiner's attention is additionally directed to the specification at page 18, line 16, which describes the coating agent being applied in a weight ratio of solid material to coating agent of 80:20 for Samples 1; page 20, lines 21 and 22 for Samples 2; page 25, lines 7 and 8 for Samples 14-18, and page 32, line 6.

The rejection of claims 15-39 under 35 U.S.C. §103 as being unpatentably obvious over Provonchee et al. in view of Jamas et al. (US 6,020,324) is respectfully traversed for claims 15-28 as amended and is moot for canceled claims 29-39. The Examiner acknowledges that Provonchee et al. do not disclose a plasticizer for which reason the Examiner relies on Jamas et al.

Applicants do not agree that the combined disclosures of Provonchee et al. and Jamas et al. set out a *prima facie* case of obviousness against claims 15-28 (or new claims 40-57 the combined disclosures do not meet Applicants' claims since neither reference teaches or suggests Applicants' coating agent comprising yeast cell wall fractions ... comprised of glucan, mannan, and chitin.

The present invention uses residues comprising yeast cell walls as a coating agent, reduced by treatment of the yeast with enzyme and extraction of the contents of the cells. The coating agent of the present invention is comprised of cell walls comprising glucan, mannan, chitin as their constituents. The coating agent comprising the yeast cell walls of the present

invention has excellent properties, as described on page 13, line 15, through page 14, line 9 of the Applicants' specification to which the Examiner's attention is directed.

Provonchee et al. disclose a beta-1,3-glucan polysaccharide gel composition prepared by dissolving the beta-1,3-glucan polysaccharide in an aqueous alkaline medium.

The present invention provides a coating agent comprising yeast cell wall fractions, as a primary constituent, consisting of cell residue of enzyme-treated yeast **comprised of glucan, mannan, and chitin**, and having a reduced amount of internal soluble cell constituents. Therefore, the coating agent of the present invention is submitted to be distinguishable and essentially different from the substance employed by Provonchee et al. which is a beta-1,3-glucan polysaccharide gel composition.

The substance used as a coating agent in Provonchee et al. is **not** a cell wall, but is a polysaccharide compound consisting of beta-1,3-glucan. The cell wall of the coating agent of the present invention further comprises mannan and chitin. Such a coating agent is neither taught nor suggested by Provonchee et al. Beta-1,3-glucan can be obtained from yeast cell walls, but Applicants' yeast cell wall fractions contain more. Therefore, the substance used as a coating agent in the invention of Provonchee et al. is different from the substance used as a coating agent in the present invention so that Applicants submit the advantages of the present invention would not be obtained by Provonchee et al.

Jamas et al. relates to a composition and method utilizing **yeast glucan as a dietary additive**. Jamas et al. relates to compositions useful for treatment of dietary disorders. Though Jamas et al. refer to coating material and plasticizer, these are mentioned only in the context of making tablets out of glucan compositions for oral administration.

The present invention provides a coating agent, comprising yeast cell wall fractions, as a primary constituent, consisting of cell residue of enzyme-treated yeast comprised of glucan, mannan, and chitin, and having a reduced amount of internal soluble cell constituents.

Therefore, the coating agent of the present invention is submitted to be distinguishable and essentially different from the substance employed by Jamas et al. which is a glucan. Moreover, Applicants are not seeking to provide compositions useful for treatment of dietary disorders as is James et al. which employs glucan as an active ingredient for reduction of the level of serum cholestetrol, for example.

Jamas et al. uses whole beta-glucans as dietary additives to provide a source of fiber. The material of Jamas et al. can be coated when used as dietary additives, but it cannot be used as a coating material. The disclosure of Jamas et al. does not use beta-glucans as a coating agent and makes no suggestion to use this material in combination with mannan and chitin, and as a coating agent. Therefore, the invention of Jamas et al. differs from the coating agent of the present invention.

Applicants' respectfully submit that the disclosure of Jamas et al. does not supply the disclosure missing in Provonchee et al. so that the combination of Provonchee et al. and Jamas et al. may not be said to render the present invention obvious.

In view of the foregoing amendments and remarks, it is requested that the rejections of record be reconsidered and withdrawn, that claims 15-28 and 39-57 as amended be allowed, and that the Application be found to be in allowable condition.

Should the Examiner not find the Application to be in allowable condition or believe that a conference would be of value in expediting the prosecution of the Application, Applicants

request that the Examiner telephone undersigned Counsel to discuss the case and afford Applicants an opportunity to submit any Supplemental Amendment that might advance prosecution and place the Application in allowable condition.

Respectfully submitted,

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## **MARKED-UP VERSION OF CLAIMS 15, 17, 22, 24, and 27:**

15. (Once amended) A coating agent [which is a plastic fluid], comprising:  
yeast cell wall fractions, as a primary constituent, consisting of cell residue of enzyme-treated yeast comprised of glucan, mannan, and chitin, and having [containing at least] a reduced amount of internal soluble cell constituents],

wherein the coating agent has properties of a plastic fluid and provides a pre-selected dissolution time in a solvent in use].

17. (Once amended) A coated material, comprising:  
a solid material to be coated; and  
a coating comprised of the coating agent according to claim 15 provided on the solid material],

wherein the coating agent is applied in a thickness effective to provide the pre-selected dissolution time in the solvent].

22. (Once amended) A coating agent [which is a plastic fluid], comprising:  
yeast cell wall fractions, as a primary constituent, consisting of cell residue of enzyme-treated and acid-treated yeast comprised of glucan, mannan, and chitin, and having [containing at least] a reduced amount of internal soluble cell constituents for which [, wherein the coating agent has properties of a plastic fluid and provides a pre-selected dissolution time in a solvent in use and wherein] the amount of internal soluble cell constituents is reduced to a greater degree

than that obtained by enzyme treatment without acid treatment due to the acid treatment having further removed the internal soluble cell constituents.

24. (Once amended) A coated material, comprising:  
a solid material to be coated; and  
a coating comprised of the coating agent according to claim 22 provided on the solid material[,  
wherein the coating agent is applied in a thickness effective to provide the pre-selected dissolution in the solvent].

27. (Once amended) A coating film, comprising the coating agent according to claim 22[,  
wherein the coating agent is applied in a thickness effective to provide the pre-selected dissolution time in the solvent].